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Water Supply Outlook For Oregon



SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

OREGON DEPARTMENT OF WATER RESOURCES

AS OF
APR. 1, 1979

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: VIEW OF A SNOTEL DATA SITE IN THE SNOWY RANGE IN WYOMING. TALL CYLINDRICAL DEVICE IS A PRECIPITATION GAGE. SNOW PILLOWS ON THE GROUND NOT VISIBLE DUE TO SNOW COVER. SHELTER HOUSE, ANTENNA TOWER, ANTENNA, AND TEMPERATURE UNIT ARE VISIBLE BEHIND THE PRECIPITATION GAGE.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

APRIL 1, 1979

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In Cooperation with

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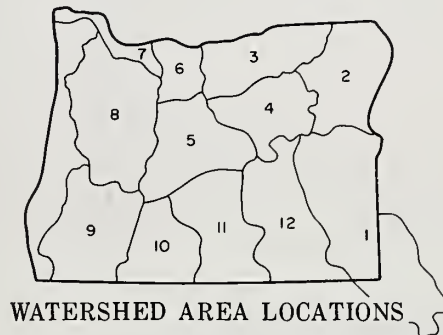
DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

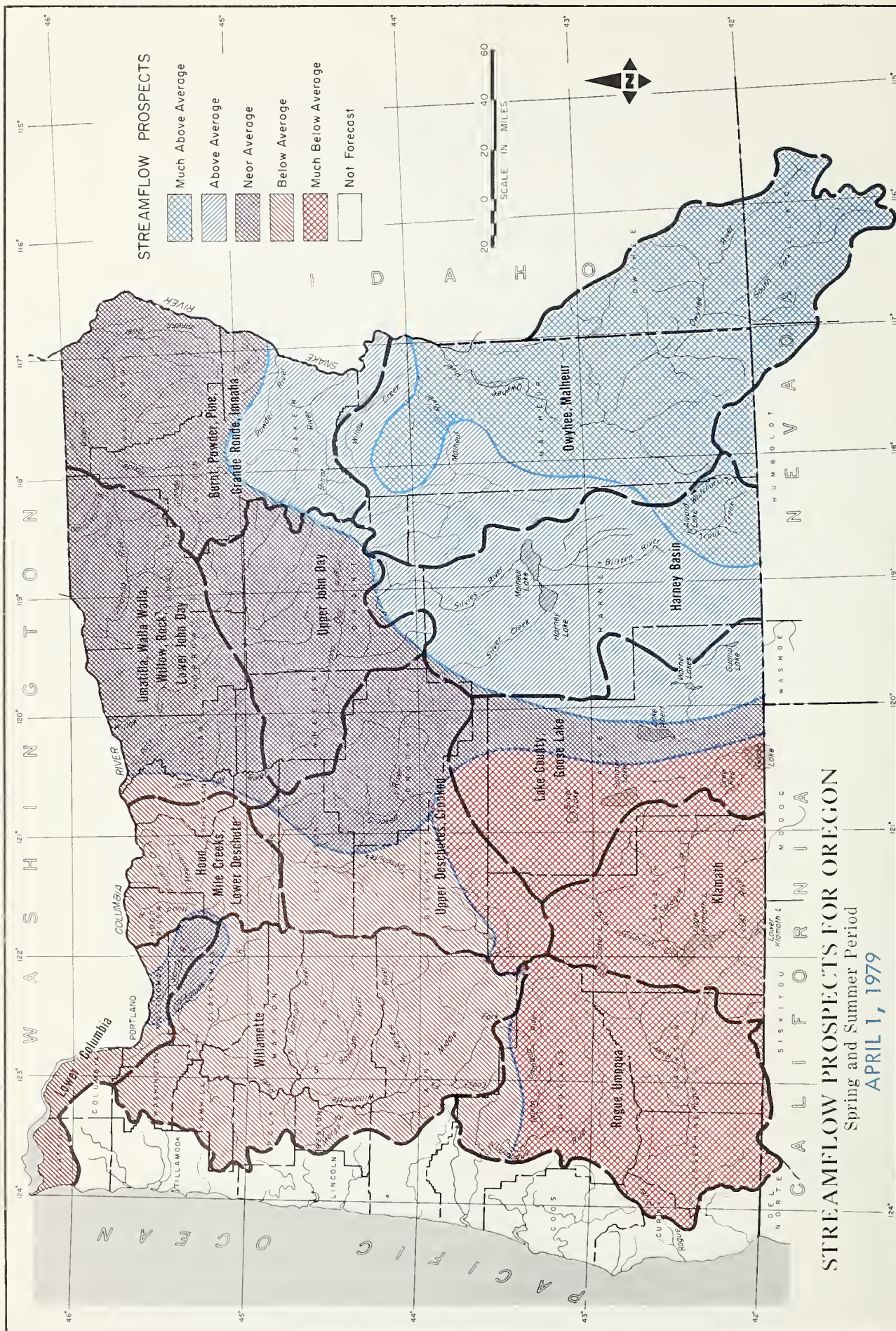
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MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)

LIST OF COOPERATORS.....INSIDE BACK COVER





A P R I L 1, 1 9 7 9

* Water supplies are forecast to be below normal in western and south *
* central Oregon, near normal in central and northeastern Oregon, and *
* above normal in the east central and southeastern part of the state. *
* March precipitation was generally below average and the snowpack began *
* to decline instead of increase in many areas during the month. *

SNOW COVER

The snowpack in Malheur County is generally much above average. Above average snowpack is found in Harney County and the Powder and Burnt River drainages. Near average snow water conditions are in the Wallowa Mountains, Blue Mountains, the John Day, and the Crooked River drainages. The northern and central Cascades are below normal. The southern Cascades, Siskiyou, and Klamath Basin have a much below normal snowpack.

PRECIPITATION

March precipitation ranged from 111% of average in Malheur County to 55% of average in the Klamath Basin. Most areas of the state received below normal precipitation. Seasonal precipitation from November to March has ranged from 95% to 114% of normal in eastern Oregon to 65% to 80% in western Oregon.

SOIL MOISTURE

Soil moisture has been recharged up to normal capacity in most mountain areas of the state.

RESERVOIR STORAGE

Most major reservoirs are reporting average to above average storage for April 1. Twenty-five reservoirs have a usable storage of 3,107,800 acre feet. Normal April 1 storage in these reservoirs is 2,218,600 acre feet.

- continued on next page -

STREAMFLOW

Reported streamflow for March was generally much above normal in central and eastern Oregon and in the Willamette drainage, but was below normal on the Rogue and Umpqua Rivers and in the Klamath Lake area.

Extended periods of clear mild weather in March melted low elevation snow which added to the runoff.

Forecasts for streamflow on representative Oregon streams are as follows:

<u>STREAM</u>	<u>PERIOD</u>	<u>FORECAST</u> <u>% of 1958-72 AVG.</u>
Owyhee net Inflow	Apr-July	165
Malheur near Drewsey	Apr-July	122
Deschutes at Benham Falls	Apr-July	70
Grande Ronde at La Grande	Apr-July	99
Willamette, Mid. Fk. nr. Oakridge	Apr-July	87
Upper Klamath Lake net Inflow	Apr-July	50
Rogue nr. Raygold	Apr-July	62
Silvies nr. Burns	Apr-July	117

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators.

Excellent water supplies are forecast for this area - ranging from 120% to 165% of normal. Snowpack water is 87% to 146% of average. Precipitation was 111% of average in March and is about average for the November-March period. Major reservoirs report average or above storage for April 1. Soil moisture recharge is about normal. No water shortages are expected.



STREAMFLOW FORECASTS

STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
BASIN, STREAM and/or FORECAST POINT					
Bully Creek at Warm Springs	19.2	138	Mar-May		13.9
Malheur near Drewsey	87	122	Apr-July		71
	92	127	Apr-Sept		72
Malheur, North Fork at Beulah	71	121	Apr-July		59
	77	120	Apr-Sept		64
Owyhee Reservoir net Inflow	511	165	Apr-July	428	309
	538	162	Apr-Seot	456	332

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Owyhee near Rome	1000 250	June 12 ---	May 24 June 20

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Beulah Reservoir	60.0	37.2	49.8	43.9
Bully Creek	30.0	27.1	27.0	22.3
Owyhee	715.0	650.0	549.9	581.1
Warm Springs	191.0	123.7	102.4	126.1

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Malheur River	2	69	83

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Jordan Creek	3	126	111
Malheur River	5	133	87
Owyhee River	7	153	146

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

OREGON

GENERAL OUTLOOK

No water shortages are anticipated in northeast Oregon. Water supply forecasts range from 86% to 122% of average. Snow water equivalent varies from 82% to 117% of average in major drainages. March precipitation and seasonal precipitation are both about average. Area reservoirs report above average storage. Soil moisture is above average.

LEGEND

- Watershed Boundary
- County Boundary
- ▲ Forecast Point
- Snow Course
- + Aerial Marker
- † Soil Moisture Station
- ⌋ Precipitation Gage
- ⚡ Radio Telemetry



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average C
Bear near Wallowa	59	90	Apr-Sept		66
Burnt near Hereford	39	121	Apr-July		32
	41	122	Apr-Sept		33
Catherine near Union	56	86	Apr-Sept		65
Eagle Creek abv. Skull Creek	152	87	Apr-July		175
	166	88	Apr-Sept		190
Grande Ronde at La Grande	150	99	Apr-July	152	154
	156	99	Apr-Sept	158	158
Hurricane near Joseph	42	90	Apr-Sept		47
Imnaha at Imnaha	298	97	Apr-Sept		307
Lostine near Lostine	108	86	Apr-Sept		125
Powder near Sumpter	66	120	Apr-July		55
	69	122	Apr-Sept		56
Wallowa, East Fork near Joseph	8.2	89	Apr-July		9.2
	10.0	88	Apr-Sept		11.4
Wallowa, at Joseph	68	90	May-July		76
Wolf Creek net Inflow	12.7	95	Apr-June		13.3

RESERVOIR STORAGE (Thousand Ac. Ft.)

RESERVOIR	Usable Capacity	Usable Storage			END OF MONTH
		This Year	Last Year	Average C	
Phillips Lake	73.5	53.8	33.7	52.3	
Thief Valley	17.4	17.4	17.4	17.4	
Unity	25.2	21.5	25.0	19.6	
Wallowa Lake	37.5	35.6	21.4	23.5	
Wolf Creek	10.4	7.0	6.6	--	

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Burnt River	4	156	117
Grande Ronde River above La Grande	4	405	82
Powder River	3	147	106
Wallowa, Imnaha, Catherine Creek	6	103	98

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average C
Burnt, Powder	2	84	108
Grande Ronde, Catherine Creek, Imnaha River	2	99	102

WATER SUPPLY OUTLOOK

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

GENERAL OUTLOOK

Normal to above normal water supply can be expected in this area. Streamflow forecasts range from 95% to 122% of average. The snowpack is average for April 1 over the area. Precipitation has been slightly below average - 88% in March and 85% for the winter season. Reservoir storage is below average at Cold Springs but above average at McKay. Soil moisture is near average.

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year Average ^c
McKay near Pilot Rock	25	102	Apr-Sept	24
Umatilla near Gibbon	66	95	Apr-July	69
	71	95	Apr-Sept	75
Umatilla at Pendleton	141	101	Apr-July	139
	145	101	Apr-Sept	144
Walla Walla, South Fork near Milton	52	97	Apr-July	53
	66	99	Apr-Sept	66
Butter Creek nr. Pine City	9.2	122	Apr-July	7.6

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Umatilla at Pendleton	550	May 25	May 22

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Cold Springs	50.0	37.5	49.8	47.3
McKay	73.8	67.9	57.9	47.5

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Umatilla, Walla Walla, McKay Creek	3	95	96

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
McKay Creek	3	275	96
Umatilla River	3	259	97
Walla Walla River	2	272	98

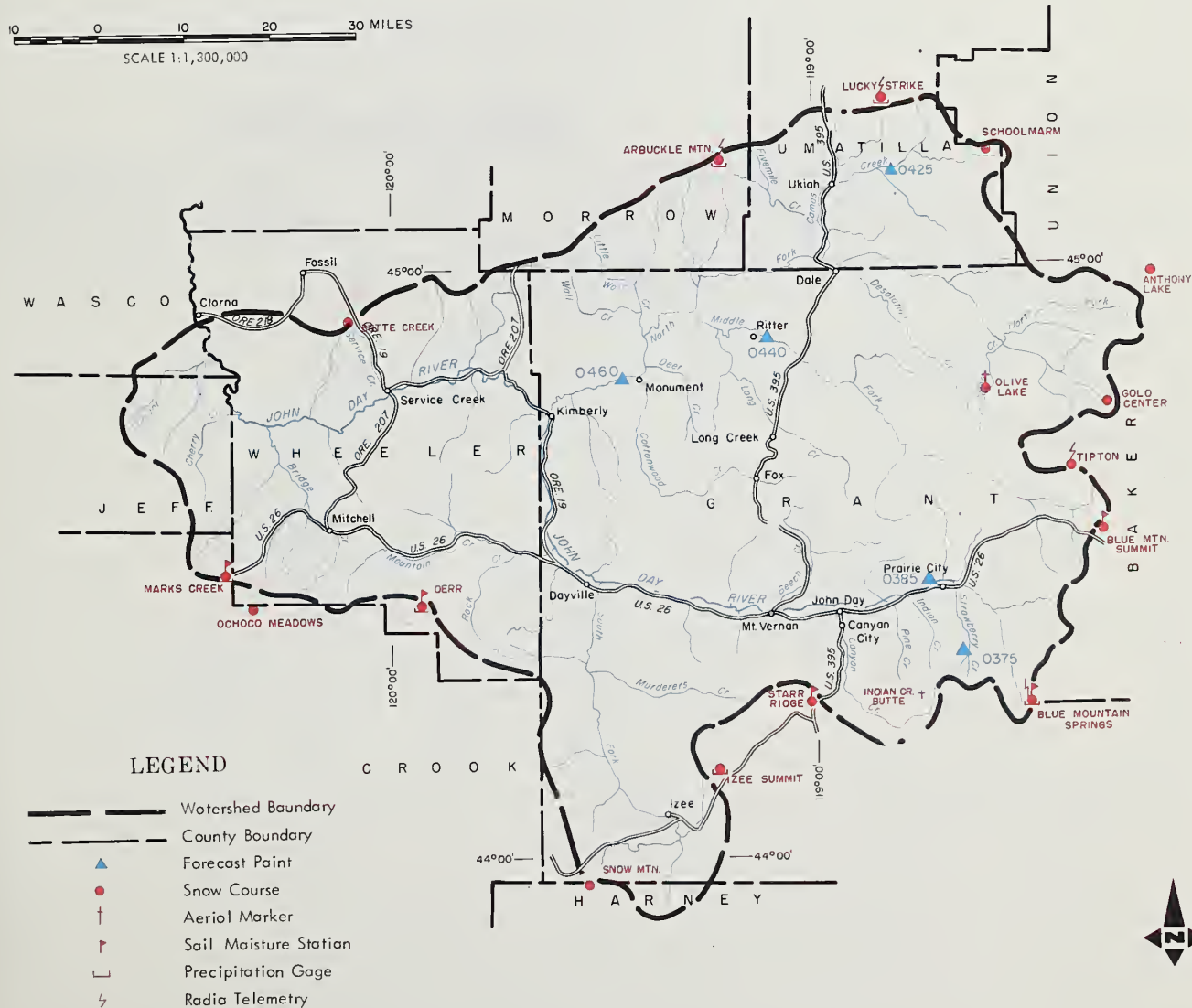
WATER SUPPLY OUTLOOK

UPPER JOHN DAY WATERSHEDS

OREGON

GENERAL OUTLOOK

Good water supplies are anticipated in this area. Forecasts range from 100% to 110% of average streamflow. Snowpack water is 122% of average for April 1. March precipitation was only 77% of average while November-March seasonal precipitation has been 88% of average. Soil moisture has been recharged to normal on the mountain watersheds.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		FORECAST PERIOD	PAST RECORD	
	FORECAST			THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Camas Creek near Ukiah	36	110	Apr-July		33
	37	110	Apr-Sept		33
John Day, Middle Fork at Ritter	105	100	Apr-July		105
	108	100	Apr-Sept		108
John Day, North Fork at Monument	556	106	Apr-July		525
	571	106	Apr-Sept		540
Strawberry near Prairie City	7.4	108	Apr-July		6.9
	7.7	102	Apr-Sept		7.6

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
John Day above Dayville	5	86	94
John Day, North Fork	2	86	100

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
John Day, North Fork	7	190	122
John Day abv. Dayville	5	187	122

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

UPPER DESCHUTES, CROOKED WATERSHEDS

OREGON

GENERAL OUTLOOK

Water supply forecasts vary from average on the Crooked River drainage to 65% to 70% of average on streams flowing from the east side of the Cascades. The snowpack shows the same trend - 98% of average on the Crooked River basin and 53% to 64% on the Cascade tributaries to the Deschutes River. Precipitation has been below normal in this area - 75% in March and 77% for the winter season. Most area reservoirs report near to above average storage. Soil moisture is reported to be average.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average C
Beaver Creek near Paulina	15.9	101	Apr-July		15.8
	16.3	102	Apr-Sept		16.0
Crane Prairie Reservoir total Inflow	56	72	Apr-July		78
	80	67	Apr-Sept		119
Crescent at Crescent Lake	12.0	65	Apr-July		18.4
	14.3	65	Apr-Sept		22
Crooked near Post	89	98	Apr-July		91
	90	99	Apr-Sept		91
Deschutes at Benham Falls	252	70	Apr-July		360
	385	70	Apr-Sept		550
Deschutes below Snow Creek	40	64	Apr-Sept		62
Deschutes, Little near La Pine	47	65	Apr-July		73
	53	65	Apr-Sept		82
Ochoco Reservoir net Inflow	17.9	95	Apr-Sept		18.8
Squaw near Sisters	35	70	Apr-Sept		50
Tumalo near Bend	31	70	Apr-Sept		44
Deschutes at Bend	117	--	Aug-Sept		--

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Crane Prairie net Inflow	300	**	July 15
Crooked R. near Post	100	June 4	June 1
Deschutes at Bend	1500	June 15	July 1
Little Deschutes near La Pine	400	May 15	June 7
	200	June 6	July 8
** Will not reach 300 cfs.			

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Crane Prairie	55.3	43.1	52.0	47.2
Crescent Lake	86.9	44.7	53.6	65.1
Ochoco	47.5	35.4	41.2	33.8
Prineville	153.0	148.7	149.1	103.8
Wickiup	200.0	191.8	190.1	190.4

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Crooked R., Upper Deschutes River	3	91	97

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Crooked, Ochoco	4	128	98
Deschutes abv. Wickiup	3	113	64
Little Deschutes	4	77	53
Tumalo & Squaw Crs.	3	123	64

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

HOOD, MILE CREEKS, LOWER DESCHUTES
WATERSHEDS
OREGON

GENERAL OUTLOOK

Water supply forecasts for this area have been reduced since last month. Streamflow is expected to be 70% to 85% of average. Precipitation was 85% of normal for March and has been 83% of normal over the winter season. Clear Lake Reservoir reports very low storage.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Average ^c
Hood River near Hood River	229	80	Apr-July	286
	254	77	Apr-Sept	332
Hood, West Fork near Dee	112	85	Apr-July	132
	123	80	Apr-Sept	154
White below Tygh Valley	89	75	Apr-July	118
	93	70	Apr-Sept	133

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Clear Branch Inflow	* 30	July 15-31	**39
* Average cfs forecast to flow for this two-week period.			
** Average cfs for period of record.			

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Clear Lake (Wasco)	11.9	0.5	4.2	5.1

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Hood River	5	181	66
Mile Creeks	1	281	71
White River	3	203	69

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

LOWER COLUMBIA WATERSHEDS

OREGON

GENERAL OUTLOOK

The flow of the Columbia River at The Dalles is forecast to be about 79% of average. Flow on the Sandy River is expected to be near average.



SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Sandy River	2	187	71

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year Average C
Columbia At The Dalles	57,800	79	Apr-June	73,160
	81,800	79	Apr-Sept	104,426
Sandy River near Marmot	315	92	Apr-July	342
	340	85	Apr-Sept	398

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW ^d (1,000 A F)			REGULATED PEAK (1,000 cfs)	DATE
	APR - SEPT.	APR - JUNE	MAY - JUNE		
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,408	65,112	622	June 10
1968	89,000	55,500	47,900	404	June 13
1969	112,300	85,700	63,800	515	May 15
1970	88,100	62,800	55,200	425	May 28
1971	122,900	88,400	73,700	557	May 13
1972	134,700	96,400	81,400	619	June 20
1958-72 Avg.	104,300	72,900	59,900	529	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

Streamflow forecasts for the Willamette Valley generally range from 77% to 89% of average but no serious water shortages are expected. The snowpack in the northern and central Oregon Cascades is poor, ranging 43% to 58% of average. March precipitation was 68% of normal and seasonal precipitation from November to March was only 76% of average. Reservoir storage is good with most reporting reservoirs being above average.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average C
Clackamas at Estacada	545	81	Apr-July		674
	651	83	Apr-Sept		789
Clackamas above Three Lynx	396	78	Apr-July		506
	486	82	Apr-Sept		604
McKenzie at McKenzie Bridge	357	79	Apr-July		453
	483	81	Apr-Sept		598
McKenzie near Vida	823	80	Apr-July		1035
	1030	82	Apr-Sept		1262
McKenzie, So. Fork near Rainbow	168	80	Apr-July		210
	198	83	Apr-Sept		239
Oak Grove Fork above Power Intake	110	89	Apr-July		123
	151	93	Apr-Sept		162
Row near Dorena	76	78	Apr-July		98
	82	80	Apr-Sept		102
Santiam, North at Mehama	645	84	Apr-July		765
	754	86	Apr-Sept		872
Santiam, South at Waterloo	490	87	Apr-July		564
	536	86	Apr-Sept		623
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge	588	87	Apr-July	463	678
	678	87	Apr-Sept	578	779
Willamette, No. Fk. of Mid. Fk. near Oakridge	145	77	Apr-July		189
	163	78	Apr-Sept		209
Willamette at Salem	3647	83	Apr-July		4397
	4240	86	Apr-Sept		4943

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Clackamas River	2	--	51
McKenzie River	3	205	50
Row River	2	135	43
Santiam River	4	236	56
Willamette, Mid. Fk.	5	131	58

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average C
Blue River	85.6*	54.5	35.6	50.0
Cottage Grove	30.0*	17.4	12.1	16.5
Cougar	155.2*	91.1	64.7	74.4
Detroit	299.9*	200.7	110.9	158.0
Dorena	70.5*	40.3	28.2	38.8
Fall Creek	115.0*	79.5	47.3	70.5
Fern Ridge	94.2*	68.2	46.4	72.4
Foster	30.0*	8.5	3.9	11.2
Green Peter	270.0*	182.6	96.6	161.3
Hills Creek	200.0*	136.6	103.1	111.8
Lookout Point	337.2*	225.5	108.6	157.9
Timothy Lake	61.7	30.9	50.6	53.5
Henry Hagg Lake	53.0	N/R	51.6	--

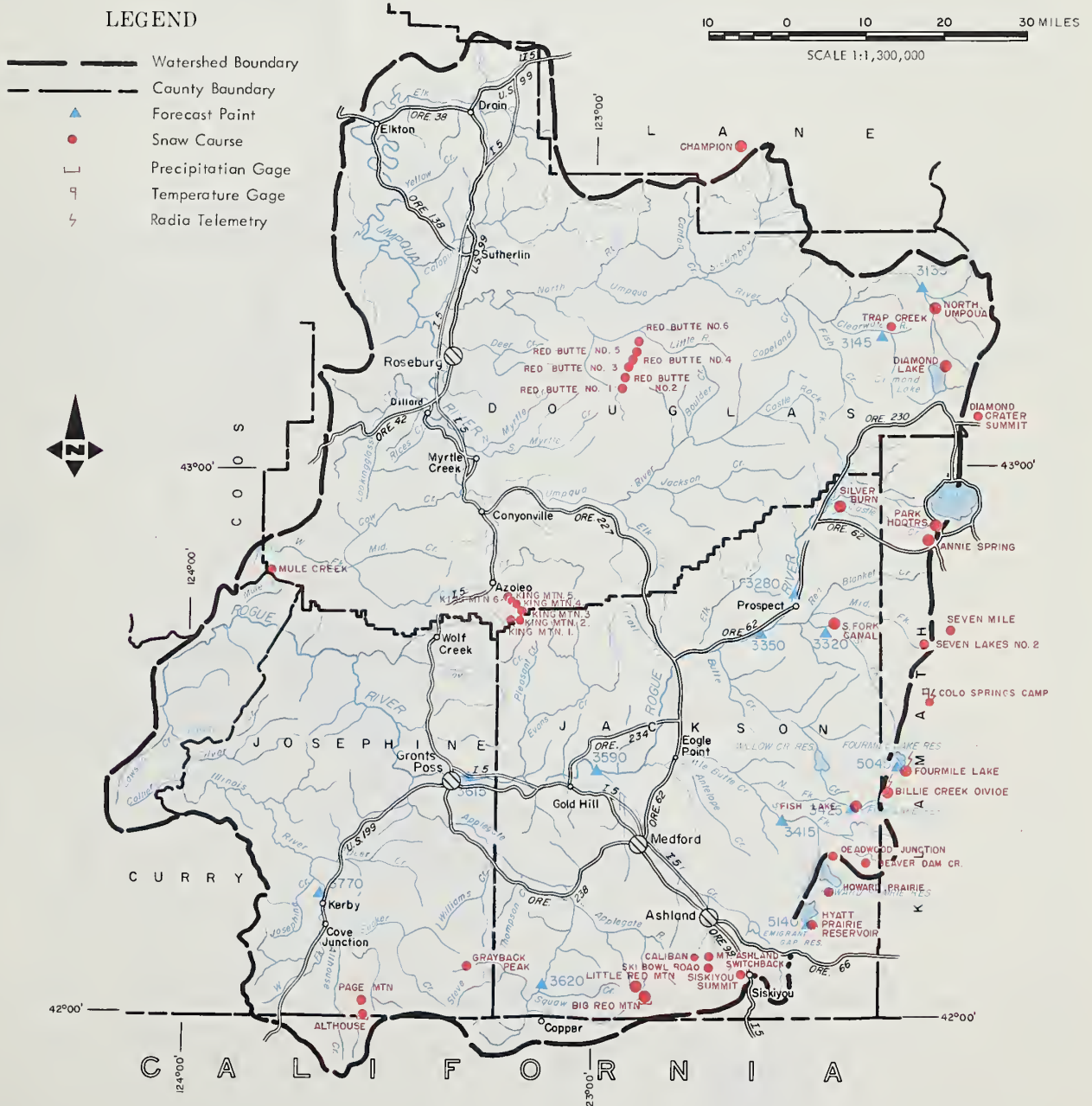
* Multiple purpose
reservoir--space
reserved primarily
for flood runoff.

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

GENERAL OUTLOOK

Water shortages are anticipated particularly for those users who divert directly from smaller streams. Streamflow forecasts range from 33% to 71% on major drainages. Snowpack water equivalent is very low, ranging 25% to 53% of average. Precipitation for March was 56% of normal and for the winter season was only 65%. Reservoir storage is variable, some reporting average to above average storage and some reporting below average storage.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Apolegate near Copper	50	38	Apr-Sept		133
Clearwater above Trap Creek	61	88	Apr-Sept		69
Fourmile Lake net Inflow	2.5	58	Apr-Sept		4.3
Hyatt Reservoir net Inflow	1.5	33	Apr-July		4.6
Illinois River near Kerby	84	44	Apr-July		191
	77	39	Apr-Sept		197
Little Butte, N. Fk. at Fish Lake nr. Lake Cr.	6.0	44	Apr-Sept		13.7
Little Butte, S. Fk. near Lake Creek	14.9	48	Apr-July		31
Rogue above Prospect	160	62	Apr-July		256
	200	64	Apr-Sept		311
Rogue, South Fork near Prospect	38	63	Apr-July		61
	45	63	Apr-Sept		72
Rogue at Raygold near Central Point	454	62	Apr-July	529	735
	565	63	Apr-Sept	691	890
Rogue at Grants Pass	591	66	Apr-Sept		890
Umpqua, No. blw. Lemolo Res. nr. Toketee Falls	118	71	Apr-Sept		166

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Little Butte Creek, South Fork	100	May 8	May 27

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Emigrant Lake	39.0	39.0	39.0	36.1
Fish Lake	8.0	5.5	5.1	6.1
Fourmile Lake	16.1	8.2	7.8	10.6
Howard Prairie	60.0	42.1	43.7	47.9
Hyatt Prairie	16.1	13.1	12.7	13.3
Lost Creek	315.0	340.1	--	--

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Applegate	3	64	53
Bear Creek	2	55	46
Butte Creek	4	141	25
Illinois River	3	60	27
North Umpqua	3	142	33
Rogue River	4	73	38

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

Below normal water supplies are forecast for this area. Forecasts range from 45% to 74% of average. The snowpack is variable, being 89% of normal in the Lost River area, but only 27% in the Williamson River Drainage. Winter precipitation has been only 64% of average and March precipitation only 55% of average. All reservoirs are reporting below average storage. Mountain soil moisture is fairly well recharged.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Clear Lake Reservoir Inflow	30	74	Apr-July		40
	32	76	Apr-Sept		42
Gerber Reservoir Inflow	10.6	57	Apr-July		18.6
	8.4	44	Apr-Sept		18.9
Sprague near Chiloquin	95	45	Apr-July		212
	121	50	Apr-Sept		242
Upper Klamath Lake net Inflow	222	50	Apr-July	426	445
	295	55	Apr-Sept	530	536
Williamson below Sprague River	186	45	Apr-Sept	402	414

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Upper Klamath	1	134	96

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Clear Lake	440.2	177.2	197.4	277.7
Gerber	94.0	48.5	56.8	66.4
Upper Klamath Lake	584.0	450.1	455.2	467.7

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Lost River	4	139	89
Sprague River	3	124	59
Upper Klamath	6	89	41
Williamson River	3	62	27

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

LAKE COUNTY, GOOSE LAKE WATERSHEDS

OREGON

GENERAL OUTLOOK

Water supply forecasts are variable over this area. The area east of Lakeview should have near normal to above normal supplies - 88% to 115% - but areas west of Lakeview will have below average streamflow ranging 55% to 61% of normal. The snowpack varies from 79% to 111% east of Lakeview, 53% west of Lakeview, down to 12% on Silver Creek. Seasonal precipitation has been 89% of average while March precipitation was only 75% of average. Reservoir storage is average to below average on major reservoirs. Water users should anticipate some shortages particularly on direct diversion from stream channels.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FDRECAST		FDRECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Chewaucan near Paisley	46	61	Apr-July		75
	49	62	Apr-Sept		79
Deep above Adel	62	94	Apr-July		66
	64	94	Apr-Sept		68
Drews Reservoir net Inflow	14.9	55	Apr-July		27
Honey Creek near Plush	15.0	88	Apr-July		17.0
	15.2	89	Apr-Sept		17.2
Silver Creek near Silver Lake	8.2	60	Apr-July		13.7
Twentymile near Adel	22	115	Apr-July		18.6
	22	114	Apr-Sept		19.1

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Chewaucan, Silver Creek, Drew Creek	1	134	96
Honey, Deep, 20-Mi. Cr.	1	102	105

RESERVOIR STORAGE (Thousand Ac. Ft.)

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Cottonwood	8.7	4.9	7.1	4.8
Drews	63.0	42.9	43.0	50.8
Thompson Valley	19.5	9.2	13.8	15.4

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Chewaucan River	3	124	59
Deep Creek	3	136	103
Drew Creek	3	306	53
Honey Creek	3	168	79
Silver Creek	3	80	12
Twentymile Creek	2	102	111

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

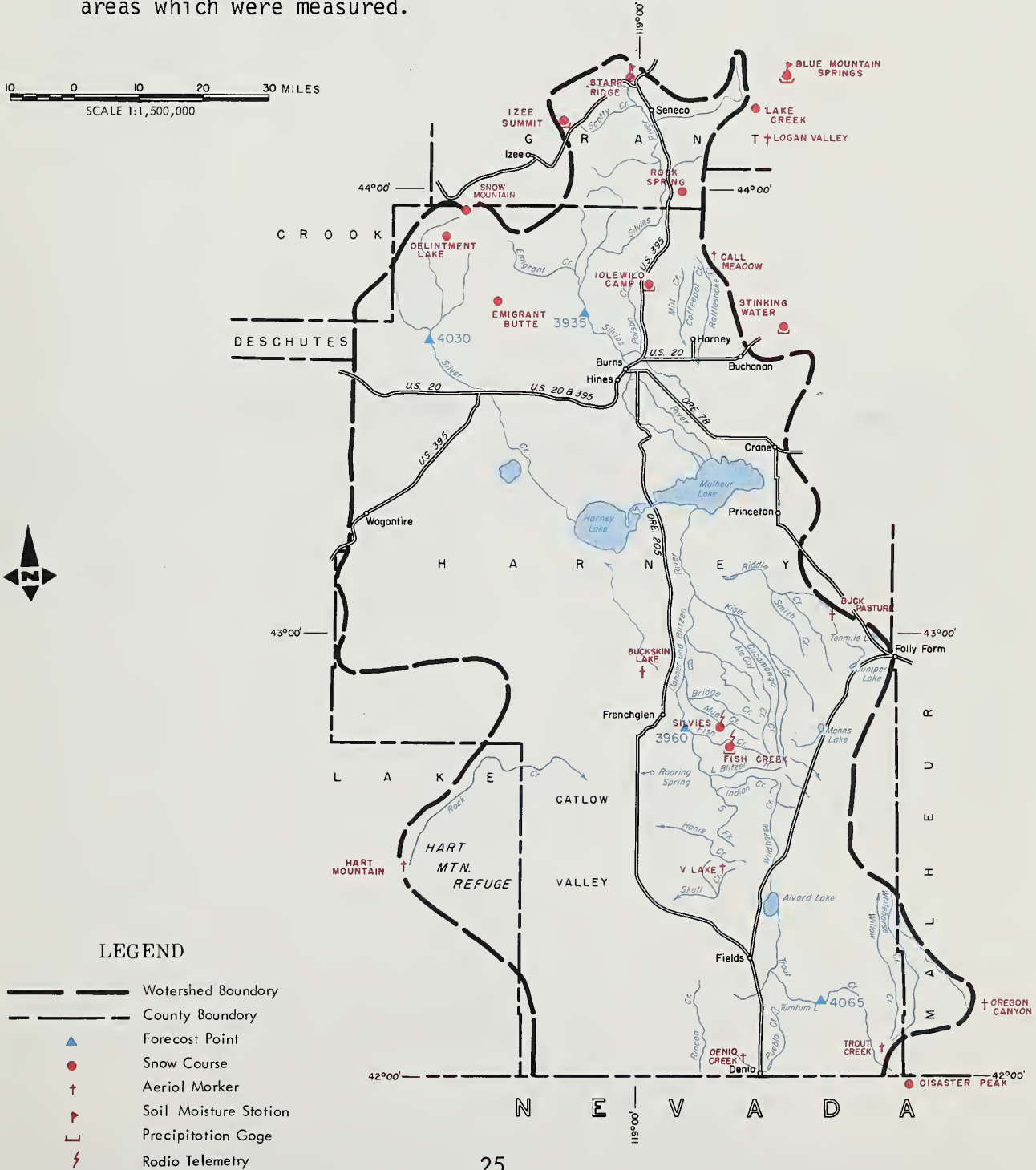
WATER SUPPLY OUTLOOK

HARNEY BASIN WATERSHEDS

OREGON

GENERAL OUTLOOK

Harney County can expect above average water supplies. Streamflow forecasts range from 117% to 152% on major drainages. The snowpack has 116% to 177% of average water equivalent. Precipitation has been excellent all year, 102% for March and 114% of average over the winter season. Soil moisture is near normal for April 1 on mountain areas which were measured.



STREAMFLOW FORECASTS

STREAMFLOW FORECASTS			THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET		
	Thousand Acre Feet	Percent of Average		Last Year	Average C	
Donner und Blitzen near Frenchglen	61	127	Apr-July		48	
	67	126	Apr-Sept		53	
Silver near Riley	22	138	Apr-July		15.6	
Silvies River near Burns	85	117	Apr-July	89	73	
	87	118	Apr-Sept	93	74	
Trout Creek near Denio	11.4	152	Apr-July		7.5	
	12.0	152	Apr-Sept		7.9	

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average C
Silvies River Silver Cr.	3	90	101
Trout Cr., Donner und Blitzen River	1	86	89

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Donner und Blitzen R.	4	124	125
Silver Creek	3	144	116
Silvies River	4	228	127
Trout Creek	3	96	177

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 1

APRIL 1, 1979

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD	
	Date of Survey	Snow Oeprh (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. C
OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge (Ida.)	3/31	8	3.4	4.3	6.2
Battle Creek (Ida.) *	4/4	0	0.0	1.5	1.7
Bear Creek (Nev.) *	3/30	64	19.2	23.4	21.4
Big Bend (Nev.)	3/26	31	9.5	8.7	8.2
Blue Mountain Springs	3/28	50	16.9	10.5	16.0
Blue Mtn. Spgs. Plw.(T)	3/28	--	20.2	--	--
Blue Mtn. Spgs. Plw.(S)	3/28	48	17.0	9.0	13.8b
Blue Mtn. Spgs. Plw.(M)	3/28	--	21.6	14.0	12.2b
Buck Pasture *	4/4	0	0.0	0.0	1.8
Buckskin, Lower (Nev.)	3/26	25	7.7	8.4	7.0
Buckskin, Upper (Nev.)	3/26	39	15.3	14.5	9.3b
Bull Basin (Ida.) *	4/4	0	0.0	0.0	0.4
Bully Creek *	4/4	0	0.0	0.0	0.8
Call Meadows *	4/4	7	2.7	1.4	2.7
Columbia Basin (Nev.)	4/4	33	11.2	3.7	6.8b
Cottonwood-Indian *	4/4	0	0.0	0.0	0.2
Disaster Peak (Nev.)	3/26	28	11.1	12.6	10.9
Eldorado Pass	3/28	0	0.0	0.0	1.4
Fawn Creek (Nev.) *	3/26	26	8.5	10.2	5.2b
Fish Creek *	4/4	49	18.6	24.9	20.3b
Fish Creek	3/30	76	28.8	28.5	26.1
Fish Creek Pillow(S)	3/30	74	28.0	--	33.7b
Fish Creek Pillow(M)	----	----	----	--	25.9b
Flag Prairie *	4/4	23	8.7	0.0	2.6
Fox Creek (Nev.)	3/30	37	9.2	8.7	9.5
Fry Canyon (Nev.)	3/26	21	8.1	5.8	6.1
Gold Creek (Nev.)	3/26	19	6.3	4.4	4.9
Granite Peak (Nev.)	3/26	43	14.5	23.6	15.4b
Hyde Pasture (Ida.) *	4/4	0	0.0	1.5	3.2
Jack Creek, Lower (Nev.)	3/26	15	5.1	0.0	2.3
Jack Creek, Upper (Nev.)	3/26	29	10.7	7.6	9.4
Jack Peak (Nev.)	3/26	73	24.1	25.0	25.2b
Lake Creek R.S.	3/29	28	10.6	5.5	9.2
Lake Creek R.S. Plw.(T)	3/29	--	14.2	--	--
Lake Creek R.S. Plw.(S)	3/29	32	11.2	6.0	--
Lake Creek R.S. Plw.(M)	3/29	--	12.0	2.9	10.0b
Laurel Draw (Nev.)	3/26	28	9.2	7.2	7.1b
Logan Valley *	4/4	37	14.1	2.3	5.9b
Lookout Butte *	4/4	0	0.0	0.0	--
Louse Canyon *	4/4	29	11.0	6.0	3.4
Martin Creek (Nev.)	3/26	23	6.9	11.9	8.5
Merritt Mountain (Nev.) *	4/4	20	6.4	0.0	5.8b
Midas (Nev.) *	3/26	1	0.1	4.3	2.4b
Mud Flat (Ida.)	3/31	16	6.0	3.5	4.9
Oregon Canyon *	4/4	23	8.7	4.7	3.8
Quinn Ridge (Nev.) *	4/4	0	0.0	0.0	0.9
Red Canyon (Ida.) *	4/4	25	9.5	6.4	5.0
Rock Spring	3/29	20	6.5	4.7	4.3
Rock Spring Plw.(S)	3/29	14	4.6	--	--
Rock Spring Plw.(M)	3/29	--	2.6	--	--
Rodeo Flat (Nev.)	3/26	24	7.9	5.7	4.9
76 Creek (Nev.) *	3/30	40	12.3	11.2	11.5b
Silver City (Ida.)	3/31	38	14.4	14.3	15.5
Silver City (Ida.) *	4/4	47	17.9	15.6	13.5b
Silvies *	4/4	23	8.7	11.3	8.7b
Silvies	3/30	40	14.6	12.7	12.9
Silvies Pillow(S)	3/30	33	10.1	--	--
Silvies Pillow(M)	----	----	----	23.2	21.9b
South Mountain #2 (Ida.)	3/31	39	15.8	11.0	13.0
South Mtn. #2 Plw.(T)	3/31	--	14.1	--	--
Stag Mountain (Nev.) *	4/4	35	10.9	4.4	4.8b
Stinking Water	3/30	0	0.0	0.0	0.8b
Succor Creek (Ida.) *	4/3	31	11.8	5.5	5.0
Taylor Canyon (Nev.)	3/26	21	7.3	0.0	2.7
Toe Jam (Nev.) *	4/4	40	14.4	8.4	8.3b
Tremewan Ranch (Nev.) *	3/26	0	0.0	0.0	0.3
Trout Creek *	4/4	31	11.8	16.6	7.6
"V" Lake *	4/4	38	14.4	5.6	6.5
Vaught Ranch (Ida.) *	4/4	0	0.0	1.5	1.7b
War Eagle (Ida.) *	4/4	75	28.5	28.8	25.1b

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. C
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Aneroid Lake #1	3/29	83	26.2	31.1	38.1
Aneroid Lake #2	3/29	75	23.2	28.1	34.0
Anthony Lake	3/28	71	24.8	22.7	27.9
Bald Mountain (OR) *	4/5	93	28.8	0.0	24.0
Beaver Reservoir (Rev.)	3/28	32	9.8	6.0	12.7
Beaver Res. Pillow (S)	3/28	31	8.3	--	--
Beaver Res. Pillow (M)	----				
Big Sheep *	4/5	60	21.6	25.2	25.2
Blue Mtn. Summit	4/3	27	9.5	6.1	8.0
Bourne	4/3	48	17.5	9.8	14.5
Bourne Pillow (T)	4/2	--	24.4	--	--
Bourne Pillow (S)	4/3	59	20.4	14.3	17.6
Bourne Pillow (M)	4/3	--	24.1	15.1	21.8
County Line	3/30	19	5.0	0.0	4.3
County Line Pillow(S)	3/30	8	1.4	--	--
County Line Pillow(M)	3/30	--	0.8	--	--
Dooley Mountain	3/29	19	6.0	5.6	7.9
Eilertson Meadows	4/3	33	12.1	9.0	11.6
Eilertson Mdw. Plw. (S)	4/3	32	11.7	--	--
Eilertson Mdw. Plw. (M)	4/3	--	10.8	--	--
Eldorado Pass	3/28	0	0.0	0.0	1.4
Gold Center	4/3	39	14.5	8.8	12.6
Gold Center Pillow(S)	4/3	33	12.4	--	--
Gold Center Pillow(M)	4/3	--	10.9	--	--
Goodrich Lake	N/R			31.8	36.8
Little Alps	3/28	46	13.3	10.8	14.8
Little Antone	3/28	17	5.8	0.9	5.4
Little Antone (Alt.)	3/28	26	9.5	4.7	8.8
Lucky Strike	4/1	43	15.9	8.9	12.7
Lucky Strike Pillow(T)	4/1	--	11.3	--	--
Lucky Strike Pillow(S)	4/1	27	9.9	2.3	9.9
Lucky Strike Pillow(M)	4/1	--	14.0	4.9	11.2
Meacham	3/29	18	7.3	0.0	9.9
Mirror Lake *	4/5	179	53.7	77.4	74.6
Moss Spring	4/5	89	28.2	22.6	24.8
Moss Spring Pillow(S)	----				
Moss Spring Pillow(M)	----				
Mt. Howard	4/5	78	28.0		
Schneider Meadow	4/5	70	30.4	31.2	30.4
Schneider Meadow Plw. (S)	----				
Schneider Meadow Plw. (M)	----			25.7	--
Schoolmarm	3/30	8	2.2	0.0	2.6
Standley *	4/5	98	34.3	34.0	33.5
Taylor Green	4/5	58	19.6	15.2	16.8
Taylor Green Pillow(T)	4/5	--	25.4		
Taylor Green Pillow(S)	----			19.6	--
Taylor Green Pillow(M)	----				
Tipton	4/3	24	9.5	6.5	9.9
Tipton Snow Pillow(S)	4/3	40	13.6	13.0	14.3
Tipton Snow Pillow(M)	----			16.1	10.8
Tollgate	3/29	67	30.5	15.1	26.7
TV Ridge *	4/5	66	22.4	19.7	23.3
West Eagle Meadows *	4/5	82	27.9	28.7	22.0
Wolf Creek Pillow(T)	4/2	--	12.8	--	--
Wolf Creek Pillow(S)	4/3	59	20.8	16.0	16.6
Wolf Creek Pillow(M)	4/3	--	15.0	--	--
* Aerial					
N/R No Report					
TR Trace					
T = Telemetry Measurement					
S = Snow Tube Measurement					
M = Manometer Measurement					

* Aerial

N/R No Report

TR Trace

T = Telemetry Measurement

S = Snow Tube Measurement

M = Manometer Measurement

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 1

APRIL 1, 1979

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. C
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS					
Arbuckle Mountain	4/1	37	13.4	1.3	10.3
Arbuckle Mtn. Plw.(T)	3/30	--	22.1	--	--
Arbuckle Mtn. Plw.(S)	4/1	70	24.4	16.3	21.7 b
Arbuckle Mtn. Plw.(M)	4/1	--	23.6	20.7	24.2
Blue Mountain Camp	3/29	23	10.6	0.0	15.2
Bowman Springs Plw.(T)	4/1	--	12.5	--	--
Bowman Springs Plw.(S)	4/1	30	10.1	3.7	10.9 b
Bowman Springs Plw.(M)	4/1	--	13.5	4.6	16.1 b
Butte Creek Summit	N/R			--	0.9 b
Emigrant Springs	3/29	3	1.3	0.0	3.9
Emigrant Springs Plw.(S)	3/29	0	0.0	--	--
Emigrant Springs Plw.(M)	----				
High Ridge Pillow(T)	4/2	--	26.3	--	--
High Ridge Pillow(S)	4/2	96	34.7	22.6	34.3 b
High Ridge Pillow(M)	4/2	--	26.7	7.4	29.4 b
Lucky Strike	4/1	43	15.9	8.9	12.7
Lucky Strike Pillow(T)	4/1	--	11.3	--	--
Lucky Strike Pillow(S)	4/1	27	9.9	2.3	9.9 b
Lucky Strike Pillow(M)	4/1	--	14.0	4.9	11.2 b
Madison Butte Pillow(S)	4/1	16	5.6	0.0	--
Madison Butte Pillow(M)	4/1	--	4.6	0.0	--
Meacham	3/29	18	7.3	0.0	9.9
Tollgate	3/29	67	30.5	15.1	26.7
UPPER JOHN DAY WATERSHEDS					
Anthony Lake	3/28	71	24.8	22.7	27.9
Arbuckle Mountain	4/1	37	13.4	1.3	10.3
Arbuckle Mtn. Plw.(T)	3/30	--	22.1	--	--
Arbuckle Mtn. Plw.(S)	4/1	70	24.4	16.3	21.7 b
Arbuckle Mtn. Plw.(M)	4/1	--	23.6	20.7	24.2
Blue Mountain Springs	3/28	50	16.9	10.5	16.0
Blue Mtn. Spgs. Plw.(T)	3/28	--	20.2	--	--
Blue Mtn. Spgs. Plw.(S)	3/28	48	17.0	9.0	13.8 b
Blue Mtn. Spgs. Plw.(M)	3/28	--	21.6	14.0	12.2 b
Blue Mountain Summit	4/3	27	9.5	6.1	8.0
Butte Creek Summit	N/R			--	0.9 b
Derr	3/28	36	7.6	5.6	8.9
Derr Pillow (S)	3/28	45	12.0	--	--
Derr Pillow (M)	3/28	--	14.4	--	--
Gold Center	4/3	39	14.5	8.8	12.6
Gold Center Plw.(S)	4/3	33	12.4	--	--
Gold Center Plw.(M)	4/3	--	10.9	--	--
Indian Creek Butte *	Discontinued				
Izee Summit	3/28	28	9.9	2.4	6.6
Lucky Strike	4/1	43	15.9	8.9	12.7
Lucky Strike Plw.(T)	4/1	--	11.3	--	--
Lucky Strike Plw.(S)	4/1	27	9.9	2.3	9.9 b
Lucky Strike Plw.(M)	4/1	--	14.0	4.9	11.2 b
Marks Creek	3/27	0	0.0	0.0	1.8
Ochoco Meadows	3/30	24	8.4	5.8	8.2
Ochoco Meadows Plw.(S)	3/30	32	10.6	9.2	--
Ochoco Meadows Plw.(M)	3/30	--	8.9	--	--
Olive Lake *	4/3	74	28.1	17.9	21.0
Schoolmarm	3/30	8	2.2	0.0	2.6
Snow Mountain	3/29	39	14.3	12.2	12.1
Snow Mountain Plw.(T)	3/29	--	12.8	--	9.3 b
Snow Mountain Plw.(S)	3/29	39	13.3	8.2	11.0 b
Snow Mountain Plw.(M)	3/29	--	13.0	--	--
Starr Ridge	3/28	19	6.8	0.0	4.6
Starr Ridge Plw.(S)	3/28	14	6.0	--	--
Starr Ridge Plw.(M)	----				
Tipton	4/3	24	9.5	6.5	9.9
Tipton Pillow (S)	4/3	40	13.6	13.0	14.3 b
Tipton Pillow (M)	----			16.1	10.8 b

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. C
UPPER DESCHUTES, CROOKED WATERSHEDS					
Bald Peter	3/29	62	24.8	27.0	32.6 b
Caldwell Ranch	3/29	7	3.2	0.0	8.5 b
Cascade Summit	3/30	47	17.2	11.3	30.1
Cascade Summit Plw.(S)	3/30	65	23.0	--	--
Cascade Summit Plw.(M)	----				
Chemult Alternate	3/31	0	0.0	3.1	9.0
Chemult Alt.Plw.(S)	----				
Chemult Alt.Plw.(M)	----				
Derr	3/28	36	7.6	5.6	8.9
Derr Pillow(S)	3/28	45	12.0	--	--
Derr Pillow(M)	3/28	--	14.4	--	--
Hogg Pass	3/27	65	28.4	18.4	42.3
Hogg Pass Pillow(T)	3/27	--	22.3	--	--
Hogg Pass Pillow(S)	3/27	74	30.4	20.0	--
Hogg Pass Pillow(M)	3/27	--	24.7	22.4	--
Hungry Flat	4/1	0	0.0	0.0	3.4
Irish-Taylor Pillow(T)	3/29	--	17.9	--	--
Irish-Taylor Pillow(S)	3/29	64	24.8	22.5	37.7 b
Irish-Taylor Pillow(M)	3/29	--	17.6	19.6	31.2 b
Lionshead *	N/R			--	13.9 b
Marks Creek	3/27	0	0.0	0.0	1.8
New Crescent Lake	3/30	13	5.2	1.6	13.5
New Crescent Lake Plw.(S)	3/30	14	5.4	--	--
New Crescent Lake Plw.(M)	----				
New Dutchman Flat #2	3/30	88	35.1	33.4	52.0
Ochoco Meadows	3/30	24	8.4	5.8	8.2
Ochoco Meadows Plw.(S)	3/30	32	10.6	9.2	--
Ochoco Meadows Plw.(M)	3/30	--	8.9	--	--
Racing Creek	3/29	36	12.0	7.4	16.8 b
Snow Mountain	3/29	39	14.3	12.2	12.1
Snow Mountain Plw.(T)	3/29	--	12.8	--	9.3 b
Snow Mountain Plw.(S)	3/29	39	13.3	8.2	11.0 b
Snow Mountain Plw.(M)	3/29	--	13.0	--	--
Summit Lake Pillow(T)	3/27	--	19.6	--	30.9 b
Summit Lake Pillow(S)	3/30	73	26.4	26.6	39.9
Summit Lake Pillow(M)	3/30	--	20.2	23.8	21.1 b
Tamarack	3/28	12	4.3	0.0	3.5
Tangent	3/30	36	12.8	10.0	22.4
Three Creek Butte	3/28	10	3.4	0.5	8.6
Three Creek Meadow	3/28	28	11.3	4.6	17.8
Three Creek Mdw. Plw.(T)	----				
Three Creek Mdw. Plw.(S)	3/28	47	15.9	11.9	18.2 b
Three Creek Mdw. Plw.(M)	3/28	--	12.2	--	--
Waldo Lake	3/29	46	18.6	14.3	32.3
Whitewater Meadow *	N/R			0.0	4.5 b
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS					
Brooks Meadow	3/30	23	7.6	2.7	10.7
Clear Lake	3/27	16	5.9	0.0	10.2
Clear Lake Pillow(S)	3/27	37	14.1	--	--
Clear Lake Pillow(M)	----				
Clear Lake Expt.	3/27	37	14.1	0.0	16.3
Greenpoint	3/30	21	7.9	7.8	16.5
Greenpoint Pillow(T)	3/27	--	12.7	--	--
Greenpoint Pillow(S)	3/30	37	12.8	10.5	8.1 b
Greenpoint Pillow(M)	3/30	--	10.2	9.7	8.1 b
Mt. Hood Test Site (T)	3/27	--	32.8	35.0	67.2 b
Mt. Hood Test Site (S)	3/27	111	48.1	48.7	55.3
Mt. Hood Test Site (M)	3/27	--	36.5	39.6	--
Mud Ridge Pillow(T)	3/29	--	19.3	--	--
Mud Ridge Pillow(S)	3/29	42	16.5	10.9	29.2 b
Mud Ridge Pillow(M)	3/29	--	20.2	5.5	29.9 b
Red Hill	4/1	83	28.0	16.4	43.3
Red Hill Pillow(T)	4/1	--	40.6	--	--
Red Hill Pillow(S)	4/1	86	29.8	16.2	20.0 b
Red Hill Pillow(M)	4/1	--	40.2	18.0	23.4 b
Still Creek	3/29	43	17.2	0.0	25.4
Switchback	3/30	18	6.1	6.5	16.4
Tilly Jane	3/28	71	28.3	34.0	41.7
Umbrella Falls	3/29	116	37.3	38.4	69.1 b

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 1

APRIL 1, 1979

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. ^c
LOWER COLUMBIA WATERSHED					
Blazed Alder Pillow(T)	N/R				
Blazed Alder Pillow(S)	----				
Blazed Alder Pillow(M)	----				
Mt. Hood Test Site(T)	3/27	--	32.8	35.0	67.2
Mt. Hood Test Site(S)	3/27	111	48.1	48.7	55.3
Mt. Hood Test Site(M)	3/27	--	36.5	39.6	--
Mud Ridge Pillow(T)	3/29	--	19.3	--	--
Mud Ridge Pillow(S)	3/29	42	16.5	10.9	29.2
Mud Ridge Pillow(M)	3/29	--	20.2	5.5	29.9
No. Fork Res.(T)	4/1	--	13.0	0.2	--
No. Fork Res.(S)	----			0.0	35.3
No. Fork Res.(M)	----				
Still Creek	3/29	43	17.2	0.0	25.4
WILLAMETTE WATERSHEDS					
Cascade Summit	3/30	47	17.2	11.3	30.1
Cascade Summit Pillow(S)	3/30	65	23.0	--	--
Cascade Summit Pillow(M)	----				
Champion	3/27	36	15.8	11.7	32.3
Clackamas Lake	3/30	10	3.7	0.0	12.6
Clackamas Lake Plw.(S)	3/30	21	7.8	--	--
Clackamas Lake Plw.(M)	----				
Clear Lake	3/27	16	5.9	0.0	10.2
Clear Lake Pillow(S)	3/27	37	14.1	--	--
Clear Lake Pillow(M)	----				
Clear Lake Exp.	3/27	37	14.1	0.0	16.3
Dead Horse Grade	3/29	21	8.1	0.0	18.8
Oetroit (Town)	3/27	0	0.0	0.0	--
Oetroit Dam	3/27	0	0.0	0.0	--
Golden Curry Creek	3/27	0	0.0	--	4.2
Hogg Pass	3/27	65	28.4	18.4	42.3
Hogg Pass Pillow(T)	3/27	--	22.3	--	--
Hogg Pass Pillow(S)	3/27	74	30.4	20.9	--
Hogg Pass Pillow(M)	3/27	--	24.7	22.4	--
Jump Off Joe Pillow(T)	3/27	--	1.3	--	--
Jump Off Joe Pillow(S)	3/27	7	2.8	0.0	6.6
Jump Off Joe Pillow(M)	3/27	--	0.4	0.0	--
Laurel Mountain	Discontinued				
Laying Creek	3/27	0	0.0	0.0	--
Lookout Point Dam	3/30	0	0.0	0.0	--
Lost Creek Ranch	4/1	0	0.0	0.0	2.2
Lund Park	3/27	0	0.0	0.0	--
Marion Forks	3/27	16	6.2	0.0	13.0
Marion Forks Pillow(S)	3/27	17	6.2	--	--
Marion Forks Pillow(M)	3/27	--	6.2	--	--
Marys Peak	4/4	5	2.6	0.0	12.8
McCredie Springs	3/30	0	0.0	0.0	--
McKenzie	3/29	66	28.8	18.0	45.9
McKenzie Pillow(S)	3/29	62	26.3	--	--
McKenzie Pillow(M)	----				
McKenzie Bridge	4/1	0	0.0	0.0	--
Mill City	Discontinued				
Mt. Hood Test Site(T)	3/27	--	32.8	35.0	67.2
Mt. Hood Test Site(S)	3/27	111	48.1	48.7	55.3
Mt. Hood Test Site(M)	3/27	--	36.5	39.6	--
Oakridge	3/30	0	0.0	0.0	--
Peavine Ridge Pillow(T)	4/1	--	8.2	0.0	17.3
Railroad Overpass	3/30	0	0.0	0.0	0.6
Railroad Overpass Plw.(S)	3/30	0	0.0	--	--
Railroad Overpass Plw.(M)	3/30	--	0.0	--	--
Saddle Mtn. Pillow(T)	N/R			--	11.8
Saddle Mtn. Pillow(S)	----				
Saddle Mtn. Pillow(M)	----				
Salt Creek Falls	3/30	19	6.0	0.0	16.4
Salt Creek Falls Plw.(S)	3/30	38	12.8	--	--
Salt Creek Falls Plw.(M)	----				

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. ^c
WILLAMETTE WATERSHEDS (CONT.)					
Santiam Junction	3/27	25	10.3	0.0	22.6
Santiam Junction Plw.(T)	3/27	--	9.6	--	--
Santiam Junction Plw.(S)	3/27	26	10.9	0.0	6.7 ^b
Santiam Junction Plw.(M)	3/27	--	7.7	0.3	--
Seine Creek Pillow(T)	4/1	0	0.0	0.2	4.5 ^b
Still Creek	3/29	43	17.2	0.0	25.4
Summit Lake Pillow(T)	3/27	--	19.6	--	30.9
Summit Lake Pillow(S)	3/30	73	26.4	26.6	39.9
Summit Lake Pillow(M)	3/30	--	20.2	23.8	21.1 ^b
Timothy Lake	3/29	31	11.3	2.3	15.6 ^b
Valsetz Summit	Discontinued				
Vida	4/1	0	0.0	0.0	--
Waldo Lake	3/29	46	18.6	14.3	32.3
Weaver Creek	3/27	0	0.0	0.0	0.3
White Branch Slide	4/1	0	0.0	0.0	8.7
Whitewater Bridge	3/30	0	0.0	0.0	2.3
ROGUE, UMPQUA WATERSHEDS					
Althouse	3/27	0	0.0	0.0	8.9
Annie Spring	3/28	63	25.2	37.8	46.7
Beaver Dam Creek	4/1	TR	0.1	--	13.9 ^b
Big Red Mountain	3/29	47	19.3	28.0	30.3
Big Red Mountain Plw.(S)	3/29	44	16.8	--	--
Big Red Mountain Plw.(M)	3/29	--	17.4	--	--
Billie Creek Divide	3/26	17	8.0	9.6	21.8
Billie Cr. Div. Pillow(T)	3/26	--	9.3	--	--
Billie Cr. Div. Pillow(S)	3/26	20	8.6	10.3	11.0 ^b
Billie Cr. Div. Pillow(M)	3/26	--	8.4	11.7	19.0 ^b
Caliban	3/29	47	15.6	37.7	35.7 ^b
Caliban (Alternate)	3/29	51	18.4	32.6	32.4 ^b
Champion	3/27	36	15.8	11.7	32.3
Cold Springs Camp	3/30	44	17.6	27.0	35.6
Cold Spgs. Camp Pillow(T)	----			--	31.4 ^b
Cold Spgs. Camp Pillow(S)	3/30	38	14.8	15.0	21.2 ^b
Cold Spgs. Camp Pillow(M)	3/30	--	11.9	17.7	--
Oadwood Junction	4/1	TR	0.1	--	9.0
Oiamond-Crater Summit	3/26	38	16.4	23.9	31.9
Oiamond Lake	3/26	23	9.2	11.2	21.3
Diamond Lake Pillow(S)	3/26	22	9.2	--	--
Oiamond Lake Pillow(M)	----				
Fish Lake	3/26	12	5.6	0.1	12.9
Fish Lake Pillow(S)	3/26	11	5.0	--	--
Fish Lake Pillow(M)	----				
Fourmile Lake	3/30	24	10.6	16.8	24.2
Fourmile Lake Pillow(T)	3/30	--	14.7	--	--
Fourmile Lake Pillow(S)	3/30	31	12.3	22.0	13.3 ^b
Fourmile Lake Pillow(M)	3/30	--	14.0	27.3	--
Grayback Peak	3/26	27	10.2	17.0	25.0
Howard Prairie Reservoir	4/1	TR	0.1	--	7.6
Hyatt Prairie	4/1	0	0.0	--	7.0
Hyatt Prairie Pillow(S)	4/1	0	0.0	--	--
Hyatt Prairie Pillow(M)	4/1	--	0.5	--	--
King Mountain #1	3/27	0	0.0	0.0	5.6 ^b
King Mountain #2	3/27	0	0.0	0.0	6.6 ^b
King Mountain #3	3/27	0	0.0	0.0	0.6 ^b
King Mountain #4	3/27	0	0.0	0.0	--
King Mountain #5	3/27	0	0.0	0.0	--
King Mountain #6	3/27	0	0.0	0.0	--
Little Red Mountain	3/27	36	12.9	21.0	24.6
Mt. Ashland Switchback	3/29	57	19.0	34.7	36.4 ^b
Mule Creek	3/27	0	0.0	0.0	7.9 ^b
North Umpqua	3/30	8	3.4	0.0	14.2
Page Mountain	3/27	0	0.0	0.0	3.7
Park Headquarters	3/28	94	38.2	48.4	62.7

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 1

APRIL 1, 1979

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. C
ROGUE, UMPQUA WATERSHEDS (CONT.)					
Red Butte #1	3/28	6	2.1	0.0	16.7
Red Butte #2	3/28	0	0.0	0.0	9.8
Red Butte #3	3/28	0	0.0	0.0	5.0
Red Butte #4	3/28	0	0.0	0.0	2.5
Red Butte #5	3/28	0	0.0	0.0	0.1
Red Butte #6	3/28	0	0.0	0.0	--
Seven Mile	3/28	47	19.5	25.6	34.3
Seven Mile Pillow(S)	3/28	35	15.4	24.0	--
Seven Mile Pillow(M)	----			20.7	16.9
Silver Burn	4/1	0	0.0	0.0	12.0
Siskiyou Summit	3/26	0	0.0	0.0	4.8
Ski Bowl Road	3/29	44	14.8	27.6	31.0
South Fork Canal	4/1	0	0.0	0.0	0.9
Trap Creek	3/30	9	3.3	0.0	12.2
KLAMATH WATERSHEDS					
Annie Spring	3/28	63	25.2	37.8	46.7
Billie Creek Oivide	3/26	17	8.0	9.6	21.8
Billie Cr. Div. Plw.(T)	3/26	--	9.3	--	--
Billie Cr. Div. Plw.(S)	3/26	--	8.4	10.3	11.0
Billie Cr. Oiv. Plw.(M)	3/26	20	8.6	11.7	19.0
Chemult Alternate	3/31	0	0.0	3.1	9.0
Chemult Alternate Plw.(S)	----				
Chemult Alternate Plw.(M)	----				
Chiloquin (PP&L)	N/R			0.0	--
Cold Springs Camp	3/30	44	17.6	27.0	35.6
Cold Spgs. Camp Plw.(T)	----			--	31.4
Cold Spgs. Camp Plw.(S)	3/30	38	14.8	15.0	21.2
Cold Spgs. Camp Plw.(M)	3/30	--	11.9	17.7	--
Crazyman Flat *	3/27	22	8.8	6.8	9.9
Crowder Flat (Calif.) *	3/27	0	0.0	0.0	1.9
Crystal (PP&L)	3/30	0	0.0	--	6.8
Diamond-Crater Summit	3/26	38	16.4	23.9	31.9
Oog Hollow *	3/27	0	0.0	0.0	0.8
Finley Corrals *	3/28	36	14.4	10.5	16.1
Fort Klamath (PP&L)	3/30	0	0.0	--	1.8
Fourmile Lake	3/30	24	10.6	16.8	24.2
Fourmile Lake Pillow(T)	3/30	--	14.7	--	--
Fourmile Lake Pillow(S)	3/30	31	12.3	22.0	13.3
Fourmile Lake Pillow(M)	3/30	--	14.0	27.3	--
Gerber	4/1	0	0.0	--	0.9
Harriman (PP&L)	3/30	0	0.0	--	2.3
Howard Prairie	4/1	TR	0.1	--	7.6
Hyatt Prairie Reservoir	4/1	0	0.0	--	7.0
Hyatt Prairie Res.Plw.(S)	4/1	0	0.0	--	--
Hyatt Prairie Res.Plw.(M)	4/1	--	0.5	--	--
Kirk (PP&L)	N/R			--	3.1
Park Headquarters	3/28	94	38.2	48.4	62.7
Quartz Mountain	3/29	2	1.1	0.0	4.5
Quartz Mtn. Ext.	3/29	3	1.3	--	--
Quartz Mtn. Pillow(S)	3/29	11	4.3	--	--
Quartz Mtn. Pillow(M)	3/29	--	2.5	--	--
Seven Mile	3/28	47	19.5	25.6	34.3
Seven Mile Pillow(S)	3/28	35	15.4	24.0	--
Seven Mile Pillow(M)	----			20.7	16.9
State Line (Calif.) *	3/27	6	2.4	0.0	6.9
Strawberry	3/28	15	6.0	3.1	6.4
Strawberry Pillow(S)	3/29	12	4.0	--	--
Strawberry Pillow(M)	----				
Summer Rim *	3/27	34	13.9	13.0	16.6
Summer Rim	3/30	37	13.4	11.2	16.6
Summer Rim Pillow(T)	3/30	--	12.0	--	--
Summer Rim Pillow(S)	3/30	41	13.3	14.7	17.2
Summer Rim Pillow(M)	3/30	--	10.2	10.0	17.5
Sycan Flat *	3/27	3	1.2	1.0	5.3
Taylor Butte	3/27	0	0.0	0.5	3.3
Taylor Butte Pillow (T)	3/27	--	0.0	--	--
Taylor Butte Pillow (S)	3/27	0	0.0	--	--
Taylor Butte Pillow (M)	3/27	--	0.0	--	4.5

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave. C
LAKE COUNTY, GOOSE LAKE WATERSHEDS					
Adin Mountain (Calif.)	3/22	30	11.8	8.2	12.2
Bald Mountain (Nev.)	3/28	3	1.1	0.0	2.4
Bear Flat Meadow *	3/27	22	8.8	9.1	9.9
Camas Creek #1	3/29	17	7.3	2.9	8.5
Camas Creek #2	3/29	24	9.4	5.9	--
Cedar Pass (Calif.)	3/26	43	16.7	13.2	16.3
Colvin Creek *	3/28	0	0.0	0.0	4.4
Cox Flat *	3/28	6	2.4	0.0	6.4
Crowder Flat (Calif.) *	3/27	0	0.0	0.0	1.9
Oismal Swamp (Calif.) *	3/28	56	21.8	22.4	18.2
Finley Corrals *	3/28	36	14.4	10.5	16.1
Hart Mountain *	3/28	0	0.0	0.0	1.4
Little Bally Mtn.(Nev.) *	3/28	7	2.6	1.2	1.9
Mt. Bidwell (Calif.)	3/28	58	21.7	25.8	26.0
North Star (Calif.)	3/28	39	15.4	14.7	16.1
Patton Meadows *	3/28	38	14.1	13.0	17.8
Quartz Mountain	3/29	2	1.1	0.0	4.5
Quartz Mountain Ext.	3/29	3	1.3	--	--
Quartz Mountain Plw.(S)	3/29	11	4.3	--	--
Quartz Mountain Plw.(M)	3/29	--	2.5	--	--
Rogger Meadows *	3/28	32	11.8	10.3	9.8
Sherman Valley *	3/28	33	12.2	8.7	11.8
Silver Creek	3/26	0	0.0	0.0	1.1
Silver Creek Pillow(S)	3/31	19	7.0	--	--
Silver Creek Pillow(M)	----	----	----	----	----
State Line (Calif.) *	3/27	6	2.4	0.0	6.9
Strawberry	3/28	15	6.0	3.1	6.4
Strawberry Pillow(S)	3/29	12	4.0	--	--
Strawberry Pillow(M)	----	----	----	----	----
Summer Rim *	3/27	34	13.9	13.0	16.6
Summer Rim	3/30	37	13.4	11.2	16.6
Summer Rim Pillow(T)	3/30	--	12.0	--	--
Summer Rim Pillow(S)	3/30	41	13.3	14.7	17.2
Summer Rim Pillow(M)	3/30	--	10.2	10.0	17.5
Sycan Flat *	3/27	3	1.2	1.0	5.3
HARNEY BASIN WATERSHEDS					
Blue Mountain Springs	3/28	50	16.9	10.5	16.0
Blue Mtn. Sprgs. Plw.(T)	3/28	--	20.2	--	--
Blue Mtn. Sprgs. Plw.(S)	3/28	48	17.0	9.0	13.8
Blue Mtn. Sprgs. Plw.(M)	3/28	--	21.6	14.0	12.2
Buck Pasture *	4/4	0	0.0	0.0	1.8
Buckskin Lake *	4/4	7	2.7	--	--
Call Meadows *	4/4	7	2.7	1.4	2.7
Oelintment Lake	3/29	25	8.0	3.3	5.6
Oenio Creek *	4/4	0	0.0	0.0	0.2
Disaster Peak (Nev.)	3/26	28	11.1	12.6	10.9
Emigrant Butte	3/29	0	0.0	0.0	1.6
Fish Creek *	4/4	49	18.6	24.9	20.3
Fish Creek	3/30	76	28.8	28.5	26.1
Fish Creek Pillow(S)	3/30	74	28.0	--	33.7
Fish Creek Pillow(M)	----	----	----	--	25.9
Hart Mountain *	3/28	0	0.0	0.0	1.4
Idlewild Camp Alternate	3/29	0	0.0	0.0	1.4
Izee Summit	3/28	28	9.9	2.4	6.6
Lake Creek R.S.	3/29	28	10.6	5.5	9.2
Lake Creek R.S. Plw.(T)	3/29	--	14.2	--	--
Lake Creek R.S. Plw.(S)	3/29	32	11.2	6.0	--
Lake Creek R.S. Plw.(M)	3/29	--	12.0	2.9	10.0
Oregon Canyon *	4/4	23	8.7	4.7	3.8
Rock Spring	3/29	20	6.5	4.7	4.3
Rock Spring Pillow(S)	3/29	14	4.6	--	--
Rock Spring Pillow(M)	3/29	--	2.6	--	--
Silvies *	4/4	23	8.7	11.3	8.7
Silvies	3/30	40	14.6	12.7	12.9
Silvies Pillow(S)	3/30	33	10.1	--	--
Silvies Pillow(M)	----	----	----	23.2	21.9
Snow Mountain	3/29	39	14.3	12.2	12.1
Snow Mountain Plw.(T)	3/29	--	12.8	--	9.3
Snow Mountain Plw.(S)	3/29	39	13.3	8.2	11.0
Snow Mountain Plw.(M)	3/29	--	13.0	--	--
Starr Ridge	3/28	19	6.8	0.0	4.0
Starr Ridge Pillow(S)	3/28	14	6.0	--	--
Starr Ridge Pillow(M)	3/28	--	0.8	--	--
Stinking Water	3/30	0	0.0	0.0	0.8
Trout Creek *	4/4	31	11.8	16.6	7.6
"V" Lake *	4/4	38	14.4	5.6	6.5

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 2

APRIL 1, 1979

SOIL MOISTURE

DRAINAGE BASIN and or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average ^c
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	Discontinued			
Big Bend (Nev.)	6700	48	16.7	Discontinued			
Blue Mountain Spring	5900	42	16.9	3/28/79	7.3	12.7	10.5
Mud Flat (Ida.)	5500	48	12.8	Discontinued			
Rodeo Flat (Nev.)	6800	42	11.0	Discontinued			
Taylor Canyon (Nev.)	6200	48	15.1	Discontinued			
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	4/3/79	12.1	14.8	12.4
Dooley Mountain	5430	36	9.2	3/29/79	6.7	7.5	5.0
Emigrant Springs	3925	48	22.3	3/27/79	20.1	19.8	20.9
Ladd Summit	3730	48	18.9	3/28/79	12.4	13.1	11.1
Moss Springs	5850	36	25.8	N/R		14.7	14.8
Tollgate	5070	48	23.6	3/29/79	15.8	17.6	17.3
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	3/27/79	13.5	14.8	13.3
Emigrant Springs	3925	48	22.3	3/27/79	20.1	19.8	20.9
Tollgate	5070	48	23.6	3/29/79	15.8	17.6	17.3
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	3/27/79	13.5	14.8	13.3
Blue Mountain Spring	5900	42	16.9	3/28/79	7.3	12.7	10.5
Blue Mountain Summit	5100	36	16.8	4/3/79	12.1	14.8	12.4
Derr	5670	24	9.0	3/28/79	8.9	8.7	8.2
Marks Creek	4540	36	14.1	3/27/79	11.3	11.3	12.2
Snow Mountain	6300	48	16.7	3/29/79	12.5	15.8	13.4
Starr Ridge	5150	36	10.6	3/28/79	10.6	10.6	10.1
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	3/28/79	8.9	8.7	8.2
Marks Creek	4540	36	14.1	3/27/79	11.3	11.3	12.2
Snow Mountain	6300	48	16.7	3/29/79	12.5	15.8	13.4
KLAMATH WATERSHEDS							
Quartz Mountain	5230	48	15.3	3/29/79	8.5	10.0	8.9
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	3/29/79	13.2	13.0	12.6
Quartz Mountain	5230	48	15.3	3/29/79	8.5	10.0	8.9
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	3/28/79	7.3	12.7	10.5
Silvies	6900	48	16.4	3/30/79	12.6	14.6	14.1
Snow Mountain	6300	48	16.7	3/29/79	12.5	15.8	13.4
Starr Ridge	5150	36	10.6	3/28/79	10.6	10.6	10.1
Willow-Bald	5000	24	6.6	3/29/79	6.6	6.6	5.8

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 3

APRIL 1, 1979

PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average ^c
Arbuckle Mountain (Morrow County)	5400	From 3/2 to 4/1	4.75"		
Beaver Reservoir (Union County)	5150	From 2/26 to 3/28	4.20"		
Big Red Mountain (Jackson County)	5600	From 2/22 to 3/29	4.32"		
Billie Creek Divide (Jackson County)	5310	From 2/26 to 3/26	4.44"		
Blue Mt. Springs (Grant County)	5900	From 2/22 to 3/28	4.32"		
Bourne (Baker County)	5800	From 3/5 to 4/3	3.24"		
Bowman Springs (Union County)	4580	From 3/2 to 4/1	4.00"		
Chemult (Klamath County)	4760	From 2/28 to 3/31	1.56"		
Clear Lake (Wasco County)	3500	From 2/26 to 3/27	3.84"		
Cold Springs (Klamath County)	6100	From 3/2 to 3/30	3.72"		
County Line (Umatilla County)	4800	From 3/1 to 3/30	2.40"		
Eilertson Meadow (Baker County)	5400	From 1/25 to 4/3	9.24"		
Emigrant Springs (Umatilla Co.)	3925	From 2/28 to 3/29	4.44"		
Fish Creek (Harney County)	7900	From 2/27 to 3/30	4.56"		
Fish Lake (Jackson County)	4665	From 2/28 to 3/26	3.24"		
Fourmile (Klamath County)	6000	From 2/28 to 3/30	4.20"		
Gold Center (Grant County)	5340	From 3/1 to 4/3	3.96"		
Greenpoint (Hood River County)	3200	From 2/28 to 3/30	6.60"		
High Ridge (Umatilla County)	4150	From 2/27 to 4/2	7.92"		
Hogg Pass (Jefferson County)	4755	From 2/28 to 3/27	5.28"		
Hyatt Prairie (Jackson County)	4900	From 2/28 to 4/1	2.52"		
Irish-Taylor (Deschutes County)	5500	From 2/27 to 3/29	5.04"		
Jump Off Joe (Linn County)	3400	From 1/31 to 3/27	18.60"		

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

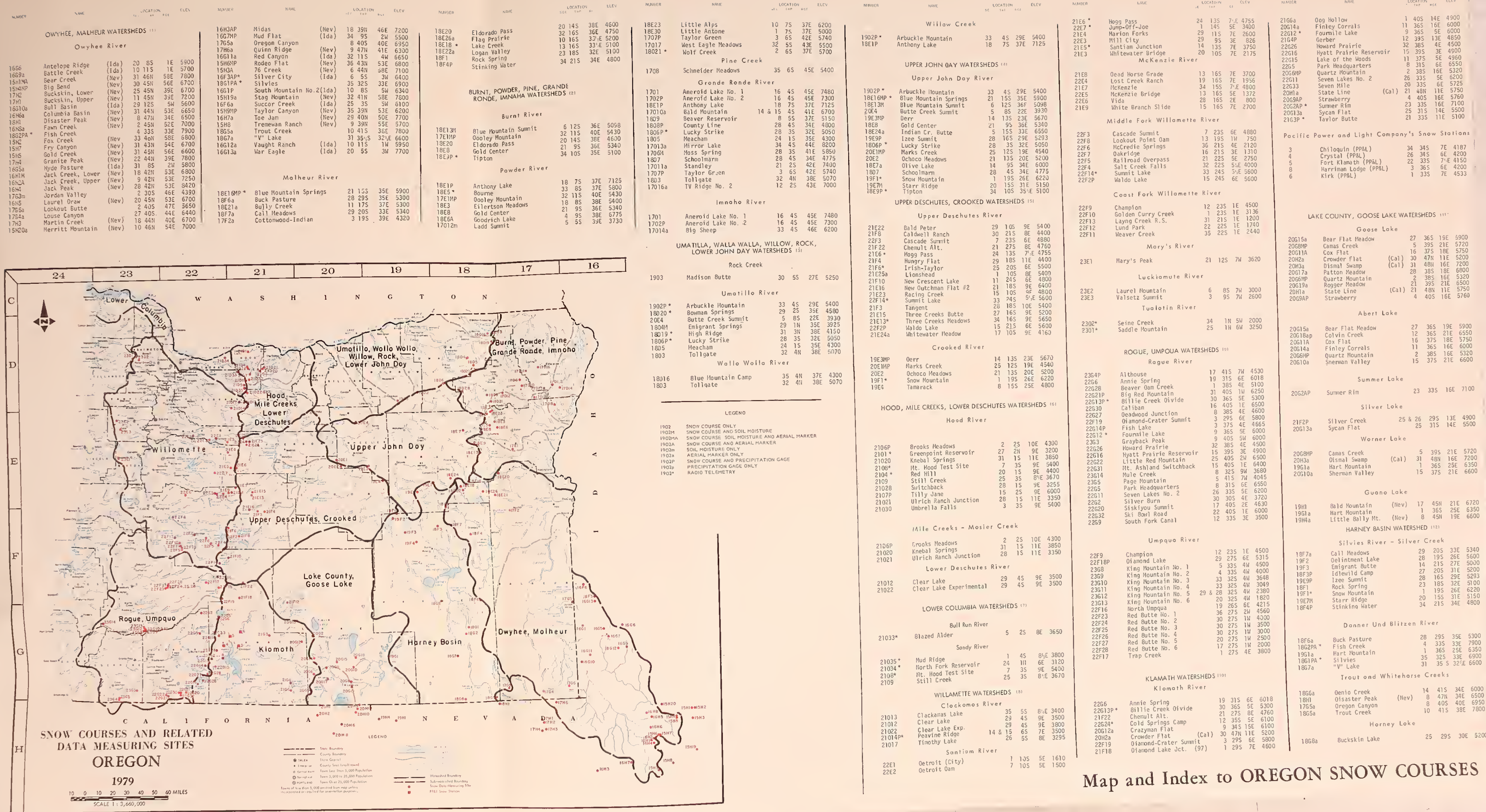
BASIC DATA SUPPLEMENT 3

APRIL 1, 1979

PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average ^c
Lake Creek (Grant County)	5120	From 3/26 to 3/29	2.64"		
Lucky Strike (Umatilla County)	5050	From 3/2 to 4/1	3.25"		
Madison Butte (Morrow County)	5250	From 3/2 to 4/1	2.52"		
Marion Forks (Linn County)	2730	From 2/28 to 3/27	5.04"		
Marks Creek (Crook County)	4540	From 2/28 to 3/27	1.10"		
Mt. Hood Test Site (Clackamas County)	5400	From 3/1 to 3/27	12.75"		
Mud Ridge (Clackamas County)	3800	From 2/28 to 3/29	4.20"		
New Crescent Lake (Klamath County)	4800	From 2/28 to 3/30	2.76"		
Railroad Overpass (Lane County)	2750	From 2/28 to 3/30	5.64"		
Red Hill (Hood River County)	4400	From 1/30 to 4/1	15.60"		
Rock Springs (Grant County)	5100	From 2/27 to 3/29	1.80"		
Santiam Junction (Lane County)	3750	From 2/27 to 3/27	5.64"		
Seven Mile (Klamath County)		From 3/1 to 3/28	4.56"		
Silvies (Harney County)	6900	From 2/27 to 3/30	1.44"		
Starr Ridge (Grant County)	5156	From 2/27 to 3/28	3.24"		
Summer Rim (Lake County)	7100	From 2/27 to 3/30	4.20"		
Summit Lake (Klamath County)	5600	From 2/28 to 3/30	5.76"		
Taylor Green (Baker County)	5740				
Three Creek Meadows (Deschutes County)	5650	From 2/26 to 3/28	3.84"		
Tipton (Baker County)	5100	From 2/28 to 4/3	2.88"		
Wolf Creek (Union County)	5700	From 1/25 to 4/3	8.64"		

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon Department Of Water Resources
- Soil and Water Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - NOAA, National Weather Service
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific National

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of Portland
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale - Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- The Crag Rats, Hood River, Oregon

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with the Snow Survey"*

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